

Molecular imaging with positron emission tomography (PET) may be used to understand better the contribution of the neuroimmune response in shaping onset, progression, and/or treatment response across neuropsychiatric conditions. This presentation will focus on the study of microglia, the resident immune cells in the brain, using PET neuroimaging with radiotracers developed to probe the neuroimmune microenvironment. Dr. Coughlin will present PET-based research strategies that build on findings from study of the 18 kDa translocator protein (TSPO) on activated microglia across select neuropsychiatric conditions. Examples of data from first-in-human studies using radiotracers that target non-TSPO targets will also be reviewed. Together, imaging these complementary neuroimmune targets in the living human brain promise to broaden our understanding of neuroimmunity in healthy aging and disease, and may inform novel approaches in treatment.